Eastern Region Energy-Water Needs Assessment Workshop Problems Summary

ENERGY PROBLEMS

	GROUP A	GROUP B	GROUP C	GROUP D	GROUP E
Near Term					
	Thermal cooling	Water not factored into energy planning	Lack of renewable energies for electric power generation (wind, low head hydro, small scale biogas)	Lack of data on the potential contribution for alternatives	More energy required as water quality degrades
	Data and modeling	Lack of data/knowledge/tools on water supply and demand (where it goes, quality, how much, etc.)	Refining capacity for fuel production	Lack of incentives leading to sustainable development	Liability and risk associated with increasing requirements for energy generators
	Hydropower development	Low water-using cooling technologies are more expensive, less efficient	Electric transmission inadequacies	Lack of integrated resource planning (IRP)	
Long Term					
	Hydrogen production	Lack of long-term integrated resource planning to include water	Lack of transmission	Lack of investment in new and innovative technologies	Federal template needed for different regions of the country
	Climate change	Lack of proper valuation of water	Lack of broad use of renewables	Uncertainty in supply and demand balance	Insuffient water available to meet energy needs
	Carbon sequestration	Hydrogen economy means more water use	Energy use and production inefficiencies	Alternative fuels and their impact(s) on water demand	Legal restraints on water for competing energy demands
	Population growth	Economics: The costs associated with extraction are increasing	Thermal pollution concerns		Establishing economic opportunities in the places where new power plants will be located

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WATER PROBLEMS

	GROUP A	GROUP B	GROUP C	GROUP D	GROUP E
Near Term					
	Aging infrastructure	Lack of conservation technologies and pricing signals	Infrastructure deterioration	Lack of data for supply and consumption	Need mechanism for allocating water during droughts (climate variability)
	In-stream uses	Lack of prioritization between competing uses	Cost and pricing of water	Lack of public knowledge (no perceived threat of water supply issues	Insufficient tools for managing water demand for energy generation and increasing supplies
	Data modeling	Lack of data, tools, and methods to give decision-makers relevant information	Surface and ground water quality contaminiation	Global food & water energy trade-offs	The amount of energy used to treat and deliver water resources
Long Term					
	Population growth	Water value	Infrastructure deterioration	Infrastructure improvements	Need to consider the ocean as a posslible solution to both water & energy problems/issues
	Climate change	Groundwater depletion is increasing demands on surface water	Competing demands: energy crops, food vs energy, domestic & industrial water use	Brackish / desal water reuse cost reduction	No clear value of water as an important resource
	State water laws and market structure	Lack of knowledge or understanding of long-term hydrologic cycle	Water quality that results from acid raid, runoff, various discharges, etc.	Regional approach to water allocation that needs to include policy makers	No mechanism for allocating scarce water resource among competing uses - depletion of quality surface and ground water resources
					Public awareness of water issues.